Self-esteem, Self-efficacy, Hope, Optimism and Resilience among HIV Positive Adolescents- an Intervention Study

Synopsis submitted to Mangalore University for the final submission of Ph.D. Degree in Psychology

Research Scholar
Ms. Rosa Nimmy Mathew

Guide
Dr.M.Y.Manjula
Professor, Department of Psychology
Christ (deemed to be University), Central Campus,Bangaluru
560029

Department of Postgraduate Studies and Research in Psychology SDM College (Autonomous), Ujire

Introduction

Human Immunodeficiency Virus (HIV) is a health issue infecting 70 million and killing around 35 million people (WHO, 2020) globally. It is an infection that attacks the immune system, specifically CD4 cells. HIV destroys the immune system, thus making the individual susceptible to other conditions like Tuberculosis. (CDC, 2015) There are two types of HIV, HIV 1 and HIV2. HIV 1 is most common in sub-Saharan Africa; it can be divided into groups like M, N, and O. Group M is most common, which is composed of subtypes A – J. HIV 2 is often found in West Central Africa, parts of Europe, and India. HIV 2 causes a slower progression of disease than HIV 1; otherwise, both cause a similar pattern of illness (Batki & Selwyn, 2008; CDC, 2015). Globally, HIV was one of the serious public health challenges before COVID 19, which brought the global responsibility to stop new infections and access HIV care (Bhana et al., 2020). According to the global statistics, there are 37.6 million people with HIV; among them, 1.7 million are children. It is worth mentioning that HIV incidence globally is 1.5 million in 2020, indicating a decline of 30% compared to 2019 (UNAIDS, 2019). Nationally as per the HIV report 2019, 23.49 lakh people are living with HIV/ AIDS in India, the highest is in Andhra Pradesh with 3.14 lakh people, and next is Karnataka, which has 2.69 lakh people living with HIV(Welfare, n.d.).

HIV is usually transmitted through sexual contact with an infected person, when the mucous membrane coating the vagina, penis, or rectum and mouth is exposed to HIV-containing body fluids such as sperm or vaginal fluids, as it happens during unprotected sexual intercourse, another method of transmission is the injection of contaminated blood, by way of sharing needles or a person is accidentally pierced with an HIV-contaminated needle, Medical procedures, such as transfusion of blood that contains HIV, procedures done with defectively sterilized instruments, or transplantation of an infected organ or tissues can also spread HIV. Transfer of virus from an infected mother to a child (MTCT) (Kapila et al., 2016;

Batki & Selwyn, 2008; MSD manual Consumer Version, 2018). The vertical transmission of mother to child can happen during pregnancy, during birth, postnatal, or through breastfeeding (CDC, 2016; Thorne & Newell, 2005). Thus making children a vulnerable group.

Challenges faced by Perinatally infected HIV Positive adolescents

Research has identified that HIV infection affects the person biologically, In the case of perinatally infected infants severe HIV encephalopathy is present, which is arrested by ART but it still leaves an impact on the cognitive and motor functioning of the children as they move into adolescence. Perinatally infected HIV Positive adolescents also tend to have shorter stature, lower body weight, delayed puberty, and micro-nutrient deficiency(Kim & Rutstein, 2010).

The lives of children and adolescents with HIV are characterised by frequent illness and hospitalisation, grief and bereavement and the need to come to terms with their own HIV status.(Butler et al., 2009) The negative effect of these experiences is further compounded by stigma and discrimination which children and adolescents perceive and/or experience, whether at home, school, community or society at large. This is exacerbated by growth delay and skin disfiguration, which are common in children and adolescents with HIV. They may also have cognitive impairment that manifests as poor executive functioning and reduced mental speed.(Ferrand et al., 2007). Several studies reported high rates of mental and behavioural disorders amongst perinatal HIV positive.The rates of psychiatric hospitalizations is three times higher compared to the general paediatric population, most commonly for depression and behaviour disorders (Vreeman, Scanlon, McHenry, & Nyandiko, 2015)

Self-esteem and Self efficacy among HIV Positive adolescents

Research by De Santis, et all (2012), Simoni, et all (2006), Varni, et al. (2012)) has identified that low self-esteem is significantly associated with depressive symptoms in

diverse samples of people living with HIV. Further, the chronicity of HIV infection can bring about important changes in the life of HIV positive adolescents, the negative effect of these experiences is further compounded by stigma and discrimination at home, school, community, or society at large. This is further exacerbated by growth delay and skin disfiguration, resulting in poor confidence, low self-esteem, and risk of poor mental health(Ferrand et al., 2007; Mavhu et al., 2013). Studies have also identified that low self-esteem in People living with HIV is due to, loss of social identity, rejection and the physical consequences of HIV disease(Van Dyk, 2008). Thus, showing the reciprocal relationship between the physical and psycho-social factors associated with HIV disease. On the other hand, Van Dyk (2008) reports in his research that increased self-esteem makes the individual living with HIV perceive him/her positively. Therefore negative self-image can create psychological and behavioural problems among normal adolescents, consequently, this may be intensified among adolescents with HIV due to the complications associated with illness (De Santis et al., 2012; Varni et al., 2012; Wild et al., 2013).

Self-efficacy is another factor that is associated with symptom management among HIV positive individuals (Marshall et al., 2013) Self-efficacy has been positively related to medication adherence and negatively correlated with psychological distress (Naar-King et al 2006). Self-efficacy is also associated with better disease outcomes and a decrease in distress over time. Increases in AIDS self-efficacy and adherence self-efficacy during 3 months of a cognitive behavioural intervention trial (n = 56 women) were significantly related to decreases in viral load (Ironson & Hayward, 2008). Earlier studies have identified that Self-esteem and Self-efficacy are linked with positive adaptation, promote psychological and social development in adolescents, and contribute to maximizing their potential. Earlier studies have identified that Self-esteem

and Self-efficacy are linked with positive adaptation, promote psychological and social development in adolescents, and contribute in maximizing their potential.

Hope and Optimism among HIV Positive Persons

Hope has a negative correlation with depression, anxiety(Sun, Tan, Fan, & Tsui, 2014; Thimm, Holte, Brennen, & Wang, 2013) and is frequently applied for managing hopelessness (Samavi, Najarpourian, & Javdan, 2018). Hope is also identified as a mediator of resilience, well-being(Satici, 2016) and in general population health, being hopeful contributes to reductions in mortality (Chida & Steptoe, 2008).

Among people living with HIV, hope increases coping(Petersen et al., 2010; Sánchez, Rice, Stein, Milburn, & Rotheram-Borus, 2010) adherence to HIV care and medications(Kelly, 2007), thus possibly improving the outcomes of ART treatment. Hopelessness, in contrast, is associated with an increased risk of depressive disorders(Johnson et al., 2001) and is a contributing factor to increase engagement in HIV-related risk behaviours (Bolland, 2003). In the case of HIV, such actions include injecting a drug or risky sexual practices. People with AIDS may be less likely to adhere to antiretroviral therapy (ART) if they have little to live for, thus engaging in practices that can spread the infection to others (Bernays, Rhodes, & Barnett, 2007). Earlier research has also highlighted the feeling of hopelessness among HIV positive adults and hopelessness mediating depressive symptoms and suicidal ideation (Govender, Schlebusch, 2012).

Optimism and pessimism are two sides of the same coin, two perspectives or outlookof life on how an individual deals with different situations one encounters. Optimism is defined as having hopefulness and confidence about the future or successful outcome of something. It is a tendency to take a favourable or hopeful view. Pessimism, on the other hand is a state of mind in which one anticipates negative outcomes.(Singh & Mishra, 2014) .An optimistic person has positive goals and positive

outlook towards life. It is a strong beliefthat despite the inevitable impediments and frustrations, events and experiences willeventually turnout all right.

Although studies have identified genetic basis of optimism and pessimism, environmental experiences are indeed believed to influence the development of these variables in several ways based on early experiences of helplessness, modelling from the primary care giver and past experiences of success and failure. Especially with the HIV infected population bereavement, helplessness from the caregiver, parents, early parental loss,and course of illness can influence their attitude formation and attribution style.(Rogers, Hansen, Levy, Tate, & Sikkema, 2005; Tomakowsky, Lumley, Markowitz, & Frank, 2001)

Studies have also identified that optimism is associated with slower progression of AIDS (Forgeard & Seligman, 2012). Studies on HIV infected people have identified that Optimism is positively associated with psychological well-being, and psychological well- being is negatively associated with HIV-related stigma(Ammirati, Lamis, Campos, & Farber,2015). Optimism is also an important predictor of adaptive coping among various specific population including HIV infection (Rogers et al., 2005). Optimistic tendencies prepare the HIV patients to face the disease in a better way, prevent depression and anxiety, promote active coping styles, medication adherence, slower disease progression, change in religiousness, resiliency, and higher CD4 counts(Torija & Hernández-Pozo, 2010).Earlier studies have identified that higher pessimism is associated with higher viral load among HIVpositive individuals. (Milam, Richardson, Marks, Kemper, & Mccutchan, 2004).

Resilience and HIV Positive Persons

Resilience is the capacity to "adapt successfully to disturbances that threaten system function, viability, or development and can involve multi-faceted processes of thriving in the face of adversity, or vulnerability" (Masten, 2014).

It has been identified that resilience processes make it easier for people who face adversity to navigate and negotiate for resources they experience as helpful while responding with sensitivity to the specific risks that individuals face(Ungar, 2012). Individuals who report high levels of resilience tend to portray an optimistic outlook, positive emotionality, in turn, leading to constructive attitudes and behaviour. High resilience aids individuals to positively cope with uncertainty, conflict, and failure. Duggal, Sacks-zimmerman, and Liberta (2016), identified that hope and resilience act as protective factors against the subjective experience of adversity, specifically of receiving a potentially adverse medical diagnosis.

Resilience is considered as one of the dimensions of positive youth development, a resilient adolescent is likely to enter adulthood with a good probability of coping well— even if he or she has experienced difficult circumstances in life (Murphey, Barry, & Vaughn, 2013). Resnick, (2000) suggests that resilient adolescents may be in a better position to avoid risky behaviours, for instance, violence, substance use, and adolescent pregnancy than the one who is not resilient. Adolescent related Studies have shown that resilience increases well-being and life satisfaction (Wagnild, 2009; Windle, 2011; Yang, Liu, Zhang, & Liu, 2015), It increases self-esteem, gratitude, optimism, and mental well-being(Davey, Eaker, & Walters, 2003; Downie, Hay, Horner, Wichmann, & Hislop, 2010). Young people who demonstrate high levels of resilience have been found to have fewer mental health problems(Sood, Bakhshi, & Devi, 2013)

Need for interventions addressing the issues faced by HIV Positive

Providing psychosocial support to adolescents living with HIV is essential. All

adolescents need support in coping with developmental issues, such as taking more responsibility for themselves, desire to be accepted and to fit in with peers, and learning to navigate their emerging sexuality and new intimate relationships. Psychosocial support can help patients, as well as their caregivers, gain confidence in themselves and their coping skills (Spiegel and Mayers,1991). It can help patients better comprehend and accept comprehensive HIV care and support services, boost adherence to HIV treatment, and equip them with the knowledge and skills they need to make informed secondary prevention decisions.(Kuo et al., 2019; Mavhu et al., 2013; Spiegel & Mayers, 1991).Caregivers also benefit from support that acknowledges the stress they are under and validates their concerns about their children or charges, while enabling them to learn how to cope with the adolescent's developmental and health needs.(World Health Organization et al., 2016)

Research Question:

What is the level of Self- Esteem, Self- efficacy, HopeResilience and Optimism among HIV Positive adolescents?

What are the challenges faced by the HIV positive adolescents according to caregivers?

What will be the effect of Comprehensive intervention on Self Esteem, self-efficacy, Hope Resilience, and Optimism?

Review of Literature

The review familiarized the researcher with the knowledge base. This process helped the researcher understand the variables studied, the relationship between the variables, the different methodologies used in research. The material drawn from the review led to the identification of research problem, gave a framework for planning an intervention and the paucity of the existing literature necessitated to assess the impact of comprehensive intervention among HIV Positive adolescents,

In this study review of literature focuses on the following areas

Physical Consequences associated with HIV

Perinatally infected HIV Positive adolescents tend to have shorter stature, lower body weight, delayed puberty, and micro-nutrient deficiency, further affecting the adolescents on their brain functioning. Perinatally infected infants present severe HIV encephalopathy, which is arrested by ART but leaves an impact on cognitive and motor functioning as they move into adolescence. The earlier studies have identified that higher viral load and CD 4 count is associated with delayed pubertal onset. The delay in sexual maturation amplifies in the later pubertal Phase. Bone mineral density decreases in an HIV-positive adolescent compared to a non-HIV adolescent. (Kim & Rutstein, 2010).

Psycho-social consequences Associated with HIV Positive Adolescents

Perinatally infected children may face psychological challenges, including higher rates of mental health and behavioural disorder (Vreeman, Scanlon, McHenry, & Nyandiko, 2015).

A study conducted in the rural district of Uganda was conducted on 123 children between 11-15 years,whose parents (one or both) are reported to have deceased of AIDS and 110 children of the similar age and gender living in intact families in the same neighbourhood.It was discovered that orphans had a higher risk of anxiety (odds ratios (OR) =6.4), depression (OR=6.6), and anger (OR=5.1) than non-orphans. Furthermore, orphans scored significantly higher than non-orphans on specific Beck Youth Depression Inventory items that are thought to be particularly "sensitive" to the presence of a depressive disorder, such as vegetative symptoms, feelings of hopelessness, and suicide ideation.(Atwine, Cantor-Graae, & Bajunirwe, 2005)

Self-efficacy and Self-esteem among HIV Positive Adolescents

One hundred and five HIV-positive patients between the ages of 20-60 years were assessed for depression, social support, and self-esteem using a cross-sectional design at Kasturba Medical College (KMC) Hospital, a tertiary care hospital in Mangalore, India. Logistic regression analysis

found out the predictors of depression among HIV positives. In univariate analysis, both gender, and self-esteem were significantly associated with depression, whereas in multivariate analysis only self-esteem was found to be significantly associated with depression. The study shows a high prevalence of depression in HIV positive patients (Jgannath et al., 2011).

Naar-King et al. (2006), tested on variables that are predictors of medication adherence among HIV-positive adults. 24 HIV Positive youth between the age of 16-24yearswere assessed on self-efficacy, psychological distress, and social support. The results revealed that Self-efficacy and psychological distress were significantly correlated with adherence. Social support specific to taking medications was also correlated with self- efficacy. In regression analysis, both self-efficacy and psychological distress were independently related to adherence. Consequently, suggesting mental health interventions to boost the self-efficacy of HIV Positive youths.

Hope and Optimism among HIV Positive Adolescents

A Qualitative exploratory study was conducted between June and September 2006 among a small group of South African AIDS orphans living in a residential care facility. The research aimed to identify and investigate developmental assets operating in the children's lives to help them cope amid exposure to adversities. The findings indicate that qualities such as optimism, perseverance, and hope seem to permeate the children's process of recovery. Strong networks of support, particularly friendships with other children, also seem to contribute to developing and sustaining resilience(Pienaar, Swanepoel, van Rensburg, & Heunis, 2011).

Torija and Hernández-Pozo (2010), refereed academic journals published from 1994 to 2009, from the EBSCO database to review a group of studies including optimism as a variable related to Positive Psychology and HIV/AIDS, to explain how it interacts with: sexual risk behaviours, disease progression, and adherence to antiretroviral (ARV) therapy. Articles were organized into three classifications: infection, disease progression, and ARV therapy adherence.

The review comprised 32 articles, the majority of which were conducted in the United States. The majority of the studies found links between optimism and risky behaviours, illness progression, and ARV adherence. More research into the evaluation of optimism, as well as optimism-related therapies, is needed to untangle the complicated association it has with sex risk behaviours, disease progression, and adherence to ARV therapy, according to the findings of this study. Moderate optimism appears to be a predictor of sexual activities linked to health.appears to be a predictor of health-related sexual behaviors.

Resilience and HIV Positive Adolescents

Qualitatively reviewed secondary data from a photo voice component of the research,, combined with narratives of Five HIV-positive Nigerian adolescent girls, was examined by Adegoke and Steyn (2017), in association with a non-governmental organisation (NGO) in Ibadan, an urban settlement in Nigeria in 2013. The study shows that participants possess the capacity to overcome their adversities from the effects of HIV infection and remain resilient. The study also revealed that participants framed positive goals, used social competence, developed coping skills, and expressed personal challenges.

Intervention Focusing on Psycho social domain among HIV Positive adolescents

L'Etang, (2011), identifies that there is a need for strategies and interventions aimed at the mental health of young people living with HIV&AIDS (PLWHA) in South Africa. The article further outlines the initiatives that have been implemented to target the health of youngPLWHA and makes the argument that new interventions catering for the psychosocial needs of young PLWHA, in terms of managing the virus, need to be developed. In addition, the study ascertains Cognitive-behavioural-based Counselling Intervention Programme as one possible means of meeting the psychosocial needs of young PLWHA.

A reviewed evaluation of community-based interventions toward improving psychosocial well-

being of people living with HIV/AIDS (PLWHA) across the globe by Wu& Li, (2013) reported positive intervention effects, ranging from a reduction in HIV/AIDS stigma, loneliness, marginalization, distress, depression, anger, and anxiety to an increase in self-esteem, self-efficacy, coping skills, and quality of life.

Mueller, Alie, Jonas, Brown, and Sherr, (2011) explored through Quasi experimental cross sectional post intervention survey the efficacy of intervention on 297 children and adolescents with HIV between the age of 8-18 years in South Africa. The results revealed thatparticipants who attended Make a difference, a community art programme showedsignificanthigher self-efficacy. The study also explored AIDS related stigma and Community and household violence as the risk factor and Social connection as protective factor among HIV patients

Significance of the study

The current study draws out the research variable from the concept of Positive Psychological Capital, theorised by Luthans, Luthans, & Luthans (2004), developed under the frame work of Positive Organisational Behaviour (POB). The PsyCaps identifies fourconstructs, namely, Self-efficacy, Hope, Optimism and Resilience which are the resource caravan that helps an individual to move toward wellbeing. Addition to this Self-esteem is also as another variable as it is associated with mental health and well-being. Building on psychological capital and self-esteem can strengthen the mental health of the adolescents asidentified by Gujar & Ali (2019). Self-esteem and self-efficacy are related to increased medical adherence and a factor that helps the HIV positive individual to deal withpsychosocial difficulties. Hope and Optimism are associated with fewer HIV symptoms, slower disease progression and also permeate the process of recovery. Higher level of resilience is associated with greater health outcomes, family regulation, respect for individuality, peer connection, and community connection among HIV Positive

adolescents. Therefore, the current research focuses on enhancing these variables by developing and implementing an intervention Programme. As mentioned earlier there is a paucity of intervention studies conducted on these variables across HIV Positive adolescents, even if conducted, it was focusing on one or two domains of development. Thus the researcher plansto develop and implement a comprehensive intervention programme emphasising on affective, social, physical and cognitive domains, As a result catering to the holistic development of the HIV positive adolescents and, sequentially creating a better chance for healthy- flourishing adulthood.

METHOD

Aim

To assess the level of self-esteem, self-efficacy, Hope, Optimism, and Resilience among HIVPositive adolescents and design a comprehensive intervention programme to enhance the level of these variables.

Objectives

Phase 1. To assess the level of Self-esteem, self-efficacy, Optimism, Resilience, and Hopeamong HIV Positive Adolescents.

To understand the specific challenges faced by these adolescents from caregivers' perspective.

Phase 2. To develop a comprehensive intervention programme for the experimental group to enhance these variables.

Phase 3. To re-assess the level of Self-esteem, Self-efficacy, Optimism, Resilience, andHope among both the experimental and control group.

Hypotheses

H_1There will be a significant improvement in the level of Self-esteem between pre-

intervention and post-intervention scoresof the experimental group and no such improvement in the control group.

H_2 There will be a significant improvement in the level of Self-efficacy between pre-intervention and post-intervention scoresof the experimental group and no such improvement in the control group.

H_3 There will be a significant improvement in the level of Hope between pre-intervention and post-intervention scoresof the experimental group and no such improvement in the control group.

H_4 There will be a significant improvement in the level of Resilience between pre-intervention and post-intervention scoresof the experimental group and no such improvement in the control group.

H_5 There will be a significant improvement in the level of optimism between pre-intervention and post-intervention scoresof the experimental group and no such improvement in the control group.

H_6 There will be a significant difference in the post-intervention scores between the experimental and control group on the level of Self-esteem, Self-efficacy, Hope, Optimism and Resilience

Variables

Independent Variable - Comprehensive Intervention Programme

Dependent Variables - The level of Self-esteem, Self-efficacy, Hope, Resilience, and Optimism

Sample

A purposive sample of 97 Adolescent boys and girls with perinatally acquired HIV infection were selected from two HIV care and support homes.

Table 1

Sample distribution

Gender	Number of participants
Boys	47
Girls	50
Total	97

Inclusion criteria

Adolescents who have perinatally acquired HIV (mother to child transmission)

Between 12 to 17 years of age

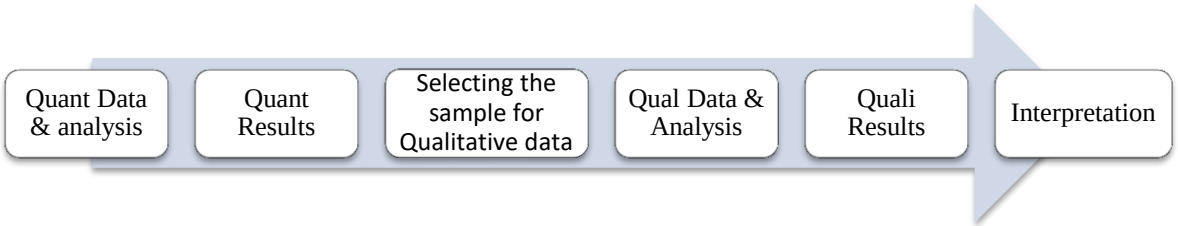
Undergoing Anti-Retroviral Therapy and are staying at an HIV care and support home

Research Design

The study adopts a mixed-method - Sequential Explanatory Design.

Figure 1

Cresswell and Ivankova Model (2006)



The present study adopts a mixed-method design - Sequential Explanatory Design- A sequential explanatory design according to Clark (2011) consists of first collecting quantitative data and then collecting qualitative data to help explain or elaborate on the quantitative results.

Tools used in research

Rosenberg's Self Esteem Scale, 1965 developed by Morris Rosenberg was used to assess global self-esteem.

General Self-Efficacy Scale (GSE) (1995), created by Ralf Schwarzer & Matthias Jerusalem to assess a general sense of perceived self-efficacy.

Optimistic-Pessimistic Attitude Scales (1998), developed by D.S Parashar was used to measure the optimistic and pessimistic attitude of the participants.

The Children's Hope Scale (CHS, 1997) by Charles Richard Snyder, was used to measure agency thinking and pathways thinking.

Child and Youth Resilience Measure(CYRM-12, 2009),developed by Resilience ResearchCentre to screen the process of resilience.

Semi-structured Interview schedule for the caregivers developed by the researcher to identifythe challenges faced by the HIV positive adolescents in different areas like schooling, fears,anxiety, stigma, peers relation, adherence to medication, coping strategy, external support,and stressors.

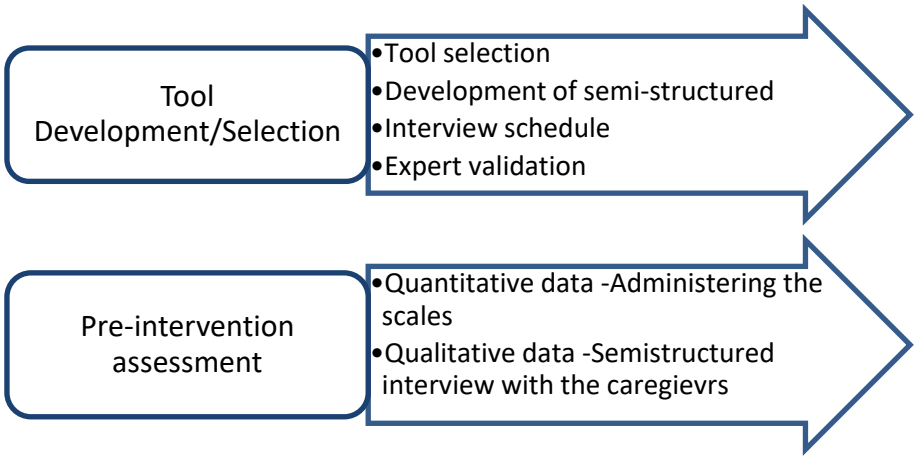
Procedure

Phase 1

Tool development /Selection

Figure 2

Diagrammatic Representation of phase 1



Details of the steps in Tool selection and development are as follow

Step1 Tool selection. The tools which measure the dependent variable were listed out, and psychometric properties were checked to ascertain the reliability and validity of the tools used in the research. The final list of standardized tools was drawn out.

Step 2 Development of semi-structured interview. A review of the literature was carried out to identify the challenges faced by HIV positive adolescents in different areas. The flow of questions and statements was framed to inquire about the caregiver's perception of the challenges faced by participants. The semi-structured interview schedule was designed.

Step 3 Translations of Tools. The tools selected were translated intoKannada as the recipient population was Kannada speaking, followed by a back-translation to English to ensure the validity of the translated version. The back-translated version was validated with the original by the researcher and the guide.

Step 4 Expert validations. The semi-structured interview schedule developed was subjected to expert validation.

Step5 Pilot Study. The tools to assess the dependent variable were administered on five male and five Female HIV positive adolescents. From the pilot study, it was established that the participants could understand and respond to all the tools of research. Hence, all the tools were retained for the study properly. The Semi-structured interview was

administered to one caregiver to validate the content, context, and actual time required to complete the checklist.

Pre-Intervention

***Step 1 administering the scale*.** The finalized tools were administered to the 97 HIV Positive Adolescents individually. The data was coded and scoring was done.

***Step 2 Semi-structured interview with the caregiver*.** To identify and understand the specific challenges faced by the HIV positive adolescents (whom they take care of) in different areas like schooling, fears, anxiety, stigma, peers relation, and adherence to medication, coping strategy, external support, and stressors. Semi-structured interview schedules for the three caregivers who stay with the HIV Positive adolescents were administered individually. The data was coded, themes were generated, and scoring was donefor the rating scale.

Phase 2 Development and execution of Comprehensive Intervention

Development of Comprehensive intervention

The rationale for planning intervention. Advancement in the medical management of HIV is increasing the life span of HIV positive adolescents. A large number of individuals are moving towards adulthood but are psychologically and socially not ready to face the world. Psycho-social distress is increasing both as an effect of the disease condition as well as due to challenges in real life. According to Atwine et al. (2005), there is a need for comprehensive intervention to createflourishing adulthood, sequentially leading to a positive medical outcome.

Step 1 Content Development on Comprehensive Intervention. The literature review by Senyoni (2013), Duncan, et al., and Yang, Liu, Zhang, and Liu, (2015)gives evidence of usingthe below-mentioned domains independently to enhance certain areas of development, specific to increase medication adherence, reduce risky behaviour, and

dealing with psychological issues. The intervention designed here focuses on combining behaviour therapy, Cognitive behaviour therapy, mindfulness, acceptance-based approaches, and life skills training covering four domains, thereby creating a comprehensive model for holistic development**.**

Physical Domain

Purpose. To increase awareness and practice of self-care among HIV Positiveadolescents.

Rationale. There is a need to psycho-educate and empower HIV Positive adolescents to adopt healthy self-care practices and develop autonomous habits to establish and maintain one'shealth. (Sampaio Filho et al., 2013)

Cognitive Domain

Purpose. To identify the dysfunctional or negative thoughts about oneself, others, and the world and to replace them with functional and realistic thoughts

Rationale. The Cognitive-behaviour-based Counselling Intervention Programme as means of meeting the psychosocial needs, identifying the dysfunctional belief, self-consciousness raising, reducing the level of anxiety and depression among young people whoare HIV positive (Hyun, Nam, & Kim, 2010; L'Etang, 2011; Senyonyi, 2013)

Affective Domain

Purpose. To embrace the totality of one's subjective experience, e.g., thoughts, feelings,sensations, and memories especially associated with the disease condition. This includes not only letting go of the struggle with distressing experiences but also abandoning the tendency to cling tightly to positive experiences, which are invariably transient.

Rationale. HIV Positive patients receiving acceptance-based therapy experienced significantly decreased feelings of stress, decreased feelings of depression, showed

improved CD4+ countsat eight weeks and six months, respectively reducing the core elements of depression, hopelessness, and self-harming behaviour (Duncan et al., 2012; James, Winmill, Anderson, & Alfoadari, 2011; Yang, Liu, Zhang, & Liu, 2015).

Social domain

Purpose - To equip HIV positive Adolescents with skills to manage their day-to-dayactivities and empower them towards social living.

Rationale - Independence and self-management among HIV positive adolescents is a necessity. As they move to adulthood, they need to take responsibility for themselves, set goals, find ways to support them, handle stigma, and make decisions. The development of positive coping mechanisms and skills can improve mental health among adolescents living with HIV. (Starr, 2011; WHO, n.d.)

Step 2: Module Development

Table 2

Topics and objectives of each domain of the comprehensive intervention

Domain	Topic	Objectives
	1. Awareness of health	To understand the need for good health practices To improve self-efficacy in medication adherence.
	2. Dental hygiene	To increase the awareness of dental care To practice dental hygiene
	3. Puberty self-care	To increase awareness about the physical changes during adolescence and the importance of self-care was introduced addressing the specific changes and issues faced by boys and girls separately
Physical		To educate on good and bad touch

Domain	4. Nutrition	To educate on the importance of nutrition for physical and mental health To create awareness about the importance of a nutritious diet and bad effects of junk food
	Self-Grooming	To create awareness of self-presentation and personal grooming To practice grooming activities regularly
Cognitive domain	1. Exploring thoughts	To explore the events and emotional response to it To identify the automatic thoughts
	2. Identifying the core negative belief	To categorize the intermediate belief To figure out the core maladaptive belief
	3. Broadening the perspective	To identify the connection between thought, emotions, and behaviour To differentiate one's opinion from fact To identify more than one truth
	4. Changing the maintaining factors	To diffuse the overwhelming negative thoughts To challenge the absolutes
	5. Explore the strengths	To focus on the future by building hope To channelize to flourishing continuum
	1. Non-judgmental awareness	To observe oneself consciously
	2. Mindfulness practice	To learn to be in the present moment
Affective Domain	3. Expansion	To become aware and acknowledge the unpleasant experience.
	4. Self-soothing exercise	To use one's sense to be calm and to increase stress tolerance
	5. Compassion	To develop compassion towards oneself To extend compassion towards others
	1. Time management	To educate on the importance of managing time To teach effective time management strategies

	2. Goal setting	To understand the importance of goals in one's life To set realistic goals
	3. Interpersonal effectiveness	To identify one's interpersonal styleTo learn effective social skills
Social domain		To teach assertiveness techniques
	4. Conflict resolution	To identify one's conflict resolution style To learn effective conflict management strategies
	Decision making	To learn the importance of making effective decisionsTo learn the techniques of decision making in a group
	Coping Skills	To identify one's healthy and unhealthy coping style To expand adaptive coping strategies

Step 3 Modality

Physical Domain

Table 3

Session plan of Physical Domain

Sl no	Topic	Exercise	Mode of Intervention	Duration
1.	Awareness of health	1) Know your body 2) Healthy practices	Reading Flowchart for coaching Pictures rounds	2hr
2	Dental Hygiene	1) Your teeth 2) Hygienic practices	Images Videos Roleplays rounds	2hr

3.	Puberty self-care	1) Changes in and out 2) Good touch, bad touch	Pictures Videos Stories Flowchart Cases	2hr
4.	Nutrition	1) Know what you eat 2) Healthy eating	PPT Stories Cases props	2hr
5.	Self-grooming	1) I am special 2) Present the best in you	Props Roleplays Modelling ppt	2hr

Cognitive Domain

Table 4

Session plan of Cognitive Domain

Session number	**Topic**	**Exercise**	**Mode of intervention**	**Duration**
1.	Exploring thought	1) Thought Journaling 2) Observing and describing thoughts	Written Fantasy Sharing in rounds and dyads	2hrs
2.	Core belief	1) 1 . ABC analysis 2) double standard dispute 3) rational analysis	Worksheets Roleplay Sharing in Triads	2 hr
3.	Broadening perspective	1) Cognitive restructuring 2) Wise mind	Worksheets Self-reflective questions	2hr

			props	
4.	Changing maintaining factors	1) Diffusing thoughts, 2) Build safety thoughts, 3) language exercise-avoid should, must always	Roleplays Fantasy exercise sharing in rounds	2hrs
5.	Explore strengths	1) Upward arrow technique, 2) continuum methods,	Movement exercise Written exercise	1.5hrs
6.	Exploring strength and confirmation	1) Teaching self-affirmative statements, 2) future-focused questions, compliments	dyads Art	1.5hrs

Affective Domain

Table 5

Session Plan of Affective Domain

Session number	Topic	Exercise	Mode of intervention	Duration
1.	Non-judgemental awareness	1. Body scan, 2. breathing exercises	Movement exercise Fantasy exercise	2hr

2.	Mindfulness practice	1. mindful eating 2. mindful talking 3. mindful walking	Movement Props Dyad	2hrs
3.	Expansion	1. lake meditation 2. letter to myself 3. fear of failure	Fantasy Written Art and craft Sharing in dyads	2hrs
4	Self-soothing exercise	1. Vision 2. Hearing 3. Taste 4. touch	Fantasy Picture Props Music Processing through rounds	2hrs
5.	Compassion-1	1. Gratitude journaling, 2. kindness jar,	Art and craft Props	2hrs
6.	Self-Compassion	1. loving-kindness meditation	Fantasy Music Processing in triads & writing	1hr

Social Domain

Table 6

Session plan of Social Domain

Session no	**Topic**	**Exercise**	**Mode of intervention**	**Duration**
1	Goal setting	1. ball in the basket 2. SMART goal	Props Written Sharing in rounds	2hrs
2	Time management	1. Tower activity 2. Flip chart	Props Movement Inputs & discussions	2 hrs

3	Interpersonal Styles	1. Identify the styles 2. Modelling 3. , constructive feedback, assertive inquiry	Scenario Video Flow charts	1hrs
4	Assertiveness Training	1. Assertiveness Techniques: Behavioural rehearsal Assertive empathy, I statement	Role-plays Role reversals	1.5hrs
5	Conflict resolution	1. Cross the bridge 2. Five style of resolution	Movement, Props Discussion Flow chart Rounds	1.5hr
6	Decision making	1. Wreck the ship 2. Brainstorming 3. Nominal & Delphi 4. SWOT analysis	Group discussion Worksheet, dyads	2hr
7	Coping skills	1. List out & categorize 2. Emotion-focused & problem-focused strategies	Triads,Movement Props,Rounds,Music & Dance	2hrs

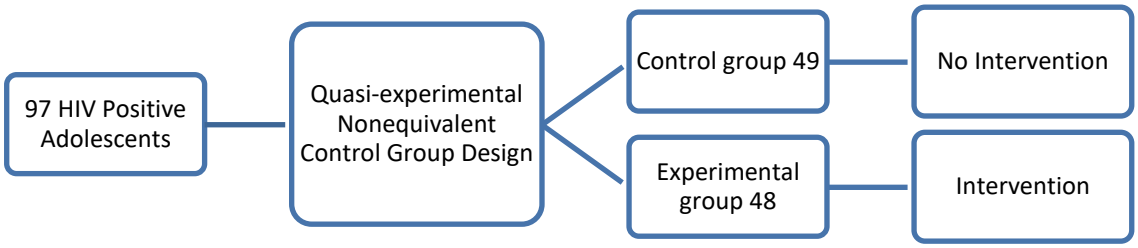
Step 4 Expert Review

The intervention program was shared with experts who work with HIV Care and clinicalpractitioners. Professionals mentioned focusing on skill sets, involving trained resource persons, and conducting sessions in smaller groups. This feedback helped in making necessary adaptations and finalization of the intervention program.

Execution of CI-PACS

Figure 3

Diagrammatic representation of Execution of the Comprehensive intervention



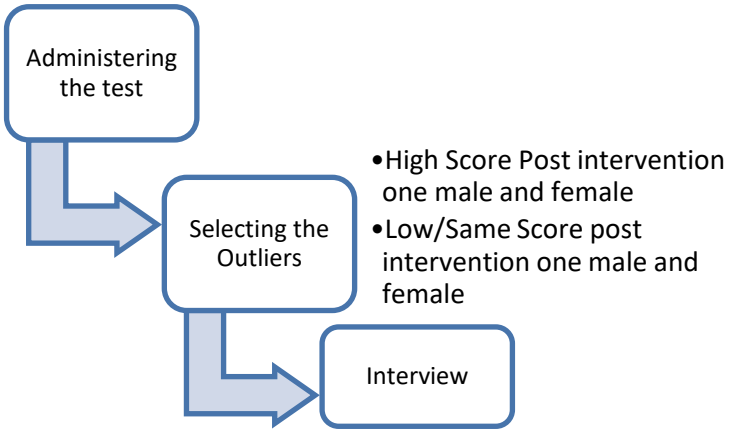
A quasi-experimental non-equivalent control design was used to evaluate the outcome of the intervention program. HIV Positive Adolescents who scored low, minimum in any one variable, were selected. Ninety-seven participants were divided into two groups—Experimental (48) and Control group (49).

The intervention was administered for the experimental group only, for boys (23)and girls (25)separately. The module was delivered through group sessions, weekly once for each group for six months, covering the duration of 44 hrs for boys and girls separately.

Phase 3- Post Intervention assessment

Figure 4

Diagrammatic representation of phase 3- Post Intervention Assessment


Administering the test
Selecting the Outliers
•High Score Post intervention one male and female
•Low/Same Score post intervention one male and female
Interview

Step 1 Assessment. The post-intervention assessment was conducted for the experimentalgroup a week after all the interventions were conducted. Around the same time, the second assessment was conducted for the control group.

Step 2 selecting the outliers. The outliers were identified from the experimental group onemale and female who showed the least improvement and one male and female who showed remarkable improvement were selected for the interview.

Step 3 Interviews. The 4 participants (Outliers) were interviewed individually to understand their experience and impact of the intervention and the data was recorded using field notes. The questions in the interview focused on

- Whether the participants found the intervention effective
- The domain of the intervention which was helpful
- The activities and techniques which benefited the most
- The activity which caused trouble
- The techniques the participant practiced regularly
- The changes observed during and after the intervention.

Analysis

To know whether the intervention enhanced self-esteem, self-efficacy, Hope, Optimism,and Resilience, the results were analyzed by independent t-test, Correlated t-test, Mann Whitney U, and Wilcoxon signed-rank test using SPSS version 25. Qualitative data was analyzed employing thematic analysis.

Ethical Consideration

- The present study has been approved by the Doctoral Committee of Mangalore University
- The purpose of the research, benefits, and possible challenges were explained, study was approved by the ethics committee of the institution from where research participants were taken.
- Informed consent was taken from the directors of the institutions, and where HIV Positive adolescents resided as most of the respondents were minors. Informed consent to participatein the research was obtained from the participants.
- Participants were informed that the data would be used only for research purpose and weremade aware of their ‘right to decline or withdraw participation ‘at any phase of the study.
- The researcher ensured high levels of sensitivity and was cautious to prevent intentional harm and avoid potential harm. The participants were assured that the details like name andidentity would not be disclosed and data would be stored using initials in a password protected file.
- The participants were also told that the group would evolve norms to be followed during thegroup sessions and participants had to follow the same.
- Throughout the intervention, before commencing every session the group was sensitizedabout the need for maintaining the confidentiality
- The data collected both using the questionnaire and the field notes were stored in such a

waythat their identities were not revealed.

- The intervention involved processing in the group, hence the aspect of confidentiality andrespect was maintained.

Major Findings of the research

Findings from the demographic data

- The sample consists of a similar number of males and females, and mid and late adolescents.
- The majority of the participants are irregular with their medication adherence.
- The majority of the participants are in the support home for 5- 10 years.
- The majority of the participants engage in one or two hobbies

Findings from quantitative data

- The majority of the participants in both the experimental and control group have a low level of self-esteem.
- The self-esteem has enhanced significantly after going through the comprehensive intervention programme in the experimental group and no such improvement is noticed in the control group.
- The majority of the participants in the experimental and control group have a moderate level of self-efficacy.
- The self-efficacy of the experimental group increased significantly after the intervention, and no improvement was noticed in the control group.
- The majority of the participants in the experimental and control group have a low level of hope.
- There was a significant improvement in the level of hope after going through the comprehensive intervention programme in the experimental group, and no such improvement was noticed in the control group.

- The majority of the participants have a moderate level of resilience.
- The resilience had increased significantly in the experimental group after the intervention programme and no such improvement was noticed in the control group.
- The majority of the participants have a pessimistic attitude followed by a realistic attitude.
- There was a significant improvement in the level of optimism among the participants in the experimental group post-intervention, and no such improvement was noticed in the control group.

Findings from qualitative data

- The themes that emerged on analysis of outliers who showed significant improvement are Optimistic attitude Increased Coping skills, Self-awareness, Self-esteem, Sense of gratitude, Availability of support system.
- The Themes that emerged on analysis of outliers who showed negligible improvement are low self-esteem, lack of support, pessimistic attitude, lack of purpose, and emotional vulnerability.
- The Themes that emerged during the Cross analysis of cases show the following intersecting factors—Optimistic/ pessimistic attitude, self-esteem, and perception of support which were enhanced among the participants who showed improvement, and lack of these factors was seen among the ones who showed negligible improvement.

Findings from the report of caregivers

- The themes that emerged on the analysis of the caregivers' report categorizes specific challenges faced by HIV positive adolescents in the areas of Physical Health, School achievement, Psycho-social, and Coping strategies

Implications

- The study highlights the fact that along with medical interventions, if comprehensive intervention is employed, it will enhance the quality of life of adolescents with HIV.

- The findings of the study can give a framework to the counselors at Integrated Counseling and Testing Centers (ICTC) to address the psycho-social needs, care, and support for HIV Positive adolescents.
- The findings of the study can be used to design interventions for adults living with HIV

Assumptions

- It is assumed that all participants have answered the quantitative tools honestly.
- It is assumed that all the participants of the experimental group went through the comprehensive intervention programme with full involvement.

Limitations

- The study has been conducted in the institutional setup and has not considered adolescents, living with families which could have helped the researcher to understand and study other socio-cultural factors influencing self-esteem, self-efficacy, hope, resilience, and optimism among HIV Positive adolescents.
- Not studying the impact of comprehensive intervention programme across gender.

Recommendations for further studies

- To design a comprehensive intervention programme for children living with HIV.
- To study the impact of the comprehensive intervention programme on adults living with HIV.
- To develop and implement an intervention program for the caregivers of people living with HIV.

References

Adegoke, C. O., & Steyn, M. G. (2017). A photo voice perspective on factors contributing to the resilience of HIV positive Yoruba adolescent girls in Nigeria. *Journal of Adolescence*, *56*, 1–10. https://doi.org/10.1016/j.adolescence.2017.01.003

Atwine, B., Cantor-Graae, E., & Bajunirwe, F. (2005). Psychological distress among AIDS orphans in rural Uganda. *Social Science & Medicine*, *61*(3), 555–564. https://doi.org/10.1016/j.socscimed.2004.12.018

Baldwin, D. R., Jackson, D., Okoh, I., & Cannon, R. L. (2010). Resiliency and Optimism: An African American Senior Citizen's Perspective. *Journal of Black Psychology*, *37*(1), 24–41. https://doi.org/10.1177/0095798410364394

Batki, S. L., & Selwyn, P. A. (2008). Substance Abuse Treatment for Persons With HIV / AIDS Abuse Persons With. *Treatment Improvement Protocol (TIP) Series*, 1–21. Retrieved from http://www.ncbi.nlm.nih.gov/books/NBK64923/pdf/Bookshelf_NBK64923.pdf

Bernays, S., Rhodes, T., & Barnett, T. (2007). Hope: a new way to look at the HIV epidemic. *AIDS*, *21*(Suppl 5), S5–S11. https://doi.org/10.1097/01.aids.0000298097.64237.4b

Bhana, A., Abas, M. A., Kelly, J., van Pinxteren, M., Mudekunye, L. A., & Pantelic, M. (2020). Mental health interventions for adolescents living with HIV or affected by HIV in low- and middle-income countries: systematic review. *BJPsych Open*, *6*(5), e104–e104. https://doi.org/10.1192/bjo.2020.67

Bolland, J. M. (2003). Hopelessness and risk behaviour among adolescents living in high-poverty inner-city neighbourhoods. *Journal of Adolescence*, *26*(2), 145–158. https://doi.org/10.1016/s0140-1971(02)00136-7

CDC. (2015). CDC HIV Basics. *Centers for Disease Control and Prevention*, 1. Retrieved from http://www.cdc.gov/hiv/basics/transmission.html

CDC. (2016). *Pregnant Women, Infants, and Children | Gender | HIV by Group | HIV/AIDS* (p.

1). p. 1. Retrieved from https://www.cdc.gov/hiv/group/gender/pregnantwomen/index.html%0Ahttps://www.cdc.gov/hiv/group/gender/pregnantwomen/opt-out.html%0Ahttps://www.cdc.gov/hiv/group/gender/pregnantwomen/index.html

Chida, Y., & Steptoe, A. (2008). Positive psychological well-being and mortality: a quantitative review of prospective observational studies. *Psychosomatic Medicine, 70*(7), 741–756. https://doi.org/10.1097/PSY.0b013e31818105ba

Davey, M., Eaker, D. G., & Walters, L. H. (2003). Resilience Processes in Adolescents: Personality Profiles, Self-Worth, and Coping. *Journal of Adolescent Research*, *18*(4), 347–362. https://doi.org/10.1177/0743558403018004002

De Santis, J. P., Gonzalez-Guarda, R. M., & Vasquez, E. P. (2012). Psychosocial and cultural correlates of depression among Hispanic men with HIV infection: a pilot study. *Journal of Psychiatric and Mental Health Nursing*, *19*(10), 860–869. https://doi.org/10.1111/j.1365-2850.2011.01865.x

Downie, J. M., Hay, D. A., Horner, B. J., Wichmann, H., & Hislop, A. L. (2010). Children living with their grandparents: resilience and wellbeing. *International Journal of Social Welfare, 19*(1), 8–22. https://doi.org/https://doi.org/10.1111/j.1468-2397.2009.00654.x

Duggal, D., Sacks-zimmerman, A., & Liberta, T. (2016). *The Impact of Hope and Resilience on Multiple Factors in Neurosurgical Patients Hope and resilience Impact of hope and resilience on mood and functioning*. *8*(10). https://doi.org/10.7759/cureus.849

Ferrand, R. A., Luethy, R., Bwakura, F., Mujuru, H., Miller, R. F., & Corbett, E. L. (2007). HIV Infection Presenting in Older Children and Adolescents: A Case Series from Harare, Zimbabwe. *Clinical Infectious Diseases*, *44*(6), 874–878. https://doi.org/10.1086/511873

Govender, R. D., & Schlebusch, L. (2012). Hopelessness, depression and suicidal ideation in HIV-positive persons. *South African Journal of Psychiatry*, *18*(1), 6.

https://doi.org/10.4102/sajpsychiatry.v18i1.302

Ironson, G., & Hayward, H. (2008). Do positive psychosocial factors predict disease progression in HIV-1? A review of the evidence. *Psychosomatic Medicine*, Vol. 70, pp. 546–554. https://doi.org/10.1097/PSY.0b013e318177216c

Jagannath, V., Unnikrishnan, B., Hegde, S., Ramapuram, J. T., Rao, S., Achappa, B., … Kotian, M. S. (2011). Association of depression with social support and self-esteem among HIV positives. *Asian Journal of Psychiatry*, *4*(4), 288–292. https://doi.org/10.1016/j.ajp.2011.10.006

Johnson, J. G., Alloy, L. B., Panzarella, C., Metalsky, G. I., Rabkin, J. G., Williams, J. B., & Abramson, L. Y. (2001). Hopelessness as a mediator of the association between social support and depressive symptoms: findings of a study of men with HIV. *Journal of Consulting and Clinical Psychology*, *69*(6), 1056–1060. https://doi.org/10.1037//0022-006x.69.6.1056

Kapila A., Chaudhary S., Sharma RB .,Vasisht H., Sisodia SS., & Gupta A. (2016). A Review On: HIV AIDS. *Indian Journal of Pharmaceutical and Biological Research*, *4*. https://doi.org/10.30750/ijpbr.4.3.9

Kelly, A. (2007). Hope is forked: hope, loss, treatments, and AIDS dementia. *Qualitative Health Research*, *17*(7), 866–872. https://doi.org/10.1177/1049732307305961

Kuo, C., LoVette, A., Pellowski, J., Harrison, A., Mathews, C., Operario, D., … Brown, L. (2019). Resilience and psychosocial outcomes among South African adolescents affected by HIV. *AIDS (London, England)*, *33 Suppl 1*(Suppl 1), S29–S34. https://doi.org/10.1097/QAD.0000000000002177

Masten, A. S. (2014). Global Perspectives on Resilience in Children and Youth. *Child Development*, *85*(1), 6–20. https://doi.org/https://doi.org/10.1111/cdev.12205

Mavhu, W., Berwick, J., Chirawu, P., Makamba, M., Copas, A., Dirawo, J., … Cowan, F. M.

(2013). Enhancing Psychosocial Support for HIV Positive Adolescents in Harare, Zimbabwe. *PLoS ONE, 8*(7), e70254. https://doi.org/10.1371/journal.pone.0070254

MSD MANUAL Consumer Version. (2018). Human Immunodeficiency Virus (HIV) Infection - Infections - MSD Manual Consumer Version. *Msdmanuals.Com*. Retrieved from https://www.msdmanuals.com/home/infections/human-immunodeficiency-virus-hiv-infection/human-immunodeficiency-virus-hiv-infection%0Ahttps://www.msdmanuals.com/home/infections/human-immunodeficiency-virus-hiv-infection/human-immunodeficiency-virus-hiv-infec

Murphey, D., Barry, M., & Vaughn, B. (2013). Positive Mental Health: Resilience. *Child Trends*, *3*(January), 1–6. Retrieved from http://www.childtrends.org/?publications=positive-mental-health-resilience

Petersen, I., Bhana, A., Myeza, N., Alicea, S., John, S., Holst, H., … Mellins, C. (2010). Psychosocial challenges and protective influences for socio-emotional coping of HIV+ adolescents in South Africa: a qualitative investigation. *AIDS Care*, *22*(8), 970–978. https://doi.org/10.1080/09540121003623693

Pienaar, A., Swanepoel, Z., van Rensburg, H., & Heunis, C. (2011). A qualitative exploration of resilience in pre-adolescent AIDS orphans living in a residential care facility. *SAHARA-J: Journal of Social Aspects of HIV/AIDS*, *8*(3), 128–137. https://doi.org/10.1080/17290376.2011.9724995

Resnick, M. D. (2000). Protective factors, resiliency and healthy youth development. *Adolescent Medicine (Philadelphia, Pa.)*, *11*(1), 157–165.

Samavi, S. A., Najarpourian, S., & Javdan, M. (2018). The Effectiveness of Group Hope Therapy in Labor Pain and Mental Health of Pregnant Women. *Psychological Reports*, *122*(6), 2063–2073. https://doi.org/10.1177/0033294118798625

Sánchez, M., Rice, E., Stein, J., Milburn, N. G., & Rotheram-Borus, M. J. (2010). Acculturation,

coping styles, and health risk behaviors among HIV positive Latinas. *AIDS and Behavior*, *14*(2), 401–409. https://doi.org/10.1007/s10461-009-9618-y

Satici, S. A. (2016). Psychological vulnerability, resilience, and subjective well-being: The mediating role of hope. *Personality and Individual Differences*, *102*, 68–73. https://doi.org/https://doi.org/10.1016/j.paid.2016.06.057

Simoni, J. M., Huang, B., Goodry, E. J., & Montoya, H. D. (2006). Social Support and Depressive Symptomatology Among HIV-Positive Women: The Mediating Role of Self-Esteem and Mastery. *Women & Health*, *42*(4), 1–15. https://doi.org/10.1300/J013v42n04_01

Sood, S., Bakhshi, A., & Devi, P. (2013). An Assessment of Perceived Stress , Resilience and Mental Health of Adolescents Living in Border Areas. *International Journal of Scientific and Research Publications*, *3*(1), 3–6.

Spiegel, L., & Mayers, A. (1991). Psychosocial aspects of AIDS in children and adolescents. *Pediatric Clinics of North America*, *38*(1), 153–167. https://doi.org/10.1016/S0031-3955(16)38048-8

Sun, H., Tan, Q., Fan, G., & Tsui, Q. (2014). Different effects of rumination on depression: key role of hope. *International Journal of Mental Health Systems*, *8*(1), 53. https://doi.org/10.1186/1752-4458-8-53

Thimm, J. C., Holte, A., Brennen, T., & Wang, C. E. A. (2013). Hope and expectancies for future events in depression. *Frontiers in Psychology*, *4*, 470. https://doi.org/10.3389/fpsyg.2013.00470

Thorne, C., & Newell, M.-L. (2005). Mother-to-Child Transmission of HIV Infection and its Prevention. *Current HIV Research*, *1*(4), 447–462. https://doi.org/10.2174/1570162033485140

Torija, C. S. T., & Hernández-Pozo, M. del R. (2010). Critical review of empirical research dealing with the relationship between optimistic tendencies and HIV related behaviors. *Suma*

Psicologica, *17*(2), 179–191. https://doi.org/10.14349/sumapsi2010.469

UNAIDS. (2019). *Global statistics of HIV*.

Ungar, M. (2012). Researching and theorizing resilience across cultures and contexts. *Preventive Medicine*, *55*(5), 387–389. https://doi.org/10.1016/j.ypmed.2012.07.021

Van Dyk, A. C. (2008). *HIVAIDS care & counselling : a multidisciplinary approach*. Cape Town: Pearson Education South Africa.

Varni, S. E., Miller, C. T., McCuin, T., & Solomon, S. (2012). Disengagement and Engagement Coping with HIV/AIDS Stigma and Psychological Well-Being of People with HIV/AIDS. *Journal of Social and Clinical Psychology*, *31*(2), 123–150. https://doi.org/10.1521/jscp.2012.31.2.123

Vreeman, R. C., Scanlon, M. L., McHenry, M. S., & Nyandiko, W. M. (2015). The physical and psychological effects of HIV infection and its treatment on perinatally HIV-infected children. *Journal of the International AIDS Society*, *18*(Suppl 6), 20258. https://doi.org/10.7448/IAS.18.7.20258

Wagnild, G. (2009). A review of the Resilience Scale. *Journal of Nursing Measurement*, *17*(2), 105–113. https://doi.org/10.1891/1061-3749.17.2.105

Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement*, *1*(2), 165–178.

Welfare, M. of H. and F. (n.d.). *PressReleaseIframePage*.

WHO. (2020). *No Title*. Retrieved from https://www.who.int/health-topics/hiv-aids#tab=tab_1

Wild, L. G., Flisher, A. J., & Robertson, B. A. (2013). Risk and resilience in orphaned adolescents living in a community affected by AIDS. *Youth & Society*, *45*(1), 140–162. https://doi.org/10.1177/0044118X11409256

Windle, G. (2011). What is resilience? A review and concept analysis. *Reviews in Clinical Gerontology*, *21*(2), 152–169. https://doi.org/10.1017/S0959259810000420